

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An isolated nucleic acid which comprises a polynucleotide encoding a protein that binds a D-galactosyl group through the $\alpha(1\rightarrow6)$ bond to the hydroxyl group attached to the carbon atom at 6-position of the D-glucose residue in a sucrose molecule to form raffinose, wherein said polynucleotide comprises a nucleotide sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 3,
- (b) a nucleotide sequence depicted by the 236th to 2584th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 4,
- (c) a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 5,
- (d) a nucleotide sequence depicted by the 134th to 2467th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 6,
- (e) a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 7,
- (f) a nucleotide sequence depicted by the 1st to 1719th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 8,
- (g) a nucleotide sequence obtained from a polynucleotide which is amplified from a nucleic acid obtained from beet with a combination of a PCR primer selected from the group consisting of SEQ ID NO: 11 and SEQ ID NO: 13 and a PCR primer selected from the group consisting of SEQ ID NO: 12 and SEQ ID NO: 14, wherein said nucleotide sequence hybridizes with a nucleotide sequence complementary to the nucleotide sequence of ~~(e) or (d)~~ (a) or (b), in a buffer comprising 0.9M NaCl and 0.09M citric acid at 65°C to 68°C, and

- (h) a nucleotide sequence obtained from a polynucleotide which is amplified from a nucleic acid obtained from mustard or rapeseed with a combination of a PCR primer selected from the group consisting of SEQ ID NO: 15, SEQ ID NO: 17 and SEQ ID NO: 19 and a PCR primer selected from the group consisting of SEQ ID NO: 16, SEQ ID NO: 18 and SEQ ID NO: 20, wherein said nucleotide sequence hybridizes with a nucleotide sequence complementary to the nucleotide sequence of any one of ~~(e) to (h)~~ (c) to (f), in a buffer comprising 0.9M NaCl and 0.09M citric acid at 65°C to 68°C.

2-3. (Cancelled).

4. (Previously Presented) An isolated nucleic acid comprising a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 3.

5. (Previously Presented) An isolated nucleic acid comprising the nucleotide sequence depicted by the 236th to 2584th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 4.

6. (Previously Presented) An isolated nucleic acid comprising a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 5.

7. (Previously Presented) An isolated nucleic acid comprising the nucleotide sequence depicted by the 134th to 2467th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 6.

8. (Previously Presented) An isolated nucleic acid comprising a nucleotide sequence encoding the amino acid sequence as depicted in SEQ ID NO: 7.

9. (Previously Presented) An isolated nucleic acid comprising the nucleotide sequence

depicted by the 1st to 1719th nucleotides in the nucleotide sequence as depicted in SEQ ID NO: 8.

10. (Previously Presented) An isolated nucleic acid comprising the nucleotide sequence as depicted in SEQ ID NO: 4, SEQ ID NO: 6, or SEQ ID NO: 8.

11-15. (Cancelled).

16. (Currently amended) An isolated nucleic acid comprising ~~a nucleic acid~~ the nucleic acid of claim 1, which is joined operatively linked to a promoter.

17. (Previously Presented) A vector comprising the nucleic acid of claim 1.

18. (Previously Presented) A transformant, wherein the nucleic acid of claim 1 is introduced into a host cell.

19. (Original) A transformant, wherein the nucleic acid of claim 16 is introduced into a host cell.

20. (Original) A transformant, wherein the vector of claim 17 is introduced into a host cell.

21. (Previously Presented) The transformant of claim 18, wherein the host cell is a microorganism.

22. (Previously Presented) The transformant of claim 18, wherein the host cell is a plant cell.

23. (Previously Presented) A method for producing a raffinose synthase which comprises

the steps of:

culturing or growing the transformant of claim 18 to produce the raffinose synthase, and
collecting the raffinose synthase.

24-27. (Cancelled).

28. (Previously Presented) The nucleic acid of claim 16, wherein said promoter is
effective in a plant cell.

29. (Previously Presented) The nucleic acid of claim 16, wherein said promoter is
effective in a yeast cell.

30. (Cancelled).